

EPI DISEASES

Diseases	Agent	Communicability	Age & Sex	Mode of Transmission	S/S	Diagnosis	Complication	Treatment	Immunization
Measles	RNA paramyxovirus	4 days before & 5 days after the appearance of rash	6 months - 3 years of age	P-P Resp., Conjunctiva * droplet infection * droplet nuclei	<u>Prodromal phase</u> (10-14 days): * fever * coryza with sneezing & nasal discharge * cough * redness of eyes with lacrimation * koplik's spot on buccal mucosa before rash appears <u>Eruptive Phase</u> : * dusky red, macular or maculopapular rash (begins behind ears, then face, neck and down the body) * rash fades leaving a brownish discolouration <u>Post-measles stage</u> : * loses weight	* Koplik's spot in the buccal mucosa	CNS : encephalitis Respiratory : Pneumonia GIT : Stomatitis, Enteritis Eye : Conjunctivitis Ear : Otitis Media	No specific Rx Supportive Care : * Vit-A * Paracetamol * Antibiotics * ORS	Active : 9 months (MR-1) 15 month (2 nd dose of measles) Passive : Immunoglobulin
Hepatitis B	HBV/ dane particle	Usually Several months/years until disappearance of HBsAg & appearance of surface antibody	*	* Parenteral * Recipient of blood transfusion * Perinatal * Sexual * Drug abuser * Surgeons * Lab technician	CNS : Headache, malaise GIT : Anorexia, Nausea, vomiting Skin : Urticaria JAUNDICE	Serological : Ag : HBsAg, HBeAg Ab : Anti-HBs IgM, Anti-HBe IgM Detection of Virus DNA : by PCR			Active : Infant : HBV (in Penta) - 6, 10, 14 week Adult : HBV - 1 st dose on an elected day, 2 nd dose : 1 month after 1 st dose, 3 rd dose : 5 months after 2 nd dose Passive : HBIG : best within 6 hours of accidental inoculation but not after 48 hrs

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TB	Mycobacterium tuberculosis Mycobacterium bovis		Male	P-P A-P *droplet infection * droplet nuclei * infected milk	* Persistant cough for 3 weeks, hemoptysis, chest pain *Night sweating * Low grade fever & evening rise of temperature * weakness * anorexia * weight loss	Sputum smear examination : In Zeihl-Neelsen stained smear AFB is seen. Sputum culture : In Lowenstein-Je nsen media Tuberculin Test/ Mantoux test Chest X-ray : patchy opacity, hilar lymphadenopat hy, pleural effusion, cavitation, consolidation (maybe) PCR	* Pleurisy * Pericarditis * TB meningitis * TB lymphadenit is * Tb intestine * TB spine (Pott's disease)	1st Line : RISEP Rifampicin, Isoniazid, Streptomycin, Ethambutol, Pyrazinamide 2nd line : FAK Fluroquinolone Amikacin Kanamycin	BCG : at or within 3 months after birth.
Diphtheria	Corynebacteriu m diphtheriae	14-28 days after onset	1-5 years	P-P Resp.+non resp. * droplet infection * infected cutaneous lesions * Contaminated object	Respiratory diphtheria *Pharyngotonsillar type: Sore throat, difficulty in swallowing, low grade fever , ‘Bull-necked’ appearance *Laryngotonsillar : fever, croupy cough, prostration, dyspnea *Nasal Non resp. Diphtheria Conjunctiva, genitalia Cutaneous Diphtheria Ulcer surrounded by erythema covered by membrane	Observation of a whitish membrane in soft palate to uvula Bacteriological culture Stained smear examination	PAMP *paralysis *airway obstruction *myocarditi s *peripheral neuritis	Treatment of case : *diphtheria antitoxin *penicillin /erythromycin Treatment of carrier: 10 day course of erythromycin Treatment of contact: booster dose taken more then 2 yr before- 1 booster dose of diphtheria toxoid	Penta : at 6,10,14 weeks

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Pertussis	Bordetella pertussis	During catarrhal & paroxysmal stage	1-5 yrs (female more)	P-P Resp. *droplet infection *direct contact	Catarrhal stage(10 d) : Lacrimation,coryza, sneezing, Paroxysmal stage (14-28 d) Bursts of rapid consecutive cough followed by whoop followed by vomiting, cyanosis, dyspnea in infants Convalescent stage (7-14 d)	Bacterial culture	* Bronchitis * Bronchiectasis * Bronchopneumonia * Epistaxis *hemoptysis *hernia	Erythromycin fo 14 days	Penta : at 6,10,14 weeks
Poliomyelitis	Poliovirus (3 serotypes- 1,2,3)	7-10 days before and after onset of symptoms	6 months - 3 yrs (male more)	P-P Feco-oral route	1.Subclinical type 2. Minor Illness type 3.Non -paralytic : stiffness & pain in neck & back 4.Paralytic type : Asymmetrical flaccid descending paralysis, meningeal irritation , tripod sign	Culture from feces or throat secretions	*Isolation *Concurrent disinfection *Absolute bedrest *Symptomatic treatment *Antibiotics *Physiotherapy *Support i.e. splint etc.	OPV-0: at birth OPV-1: 6 week OPV-2: 10 week OPV-3 + IPV : 14 week OPV-4: 9 month By NID : all children under 5 yrs are immunized with 2 drops of OPV.	

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Tetanus	Clostridium tetani	No human to human transmission	5-40 yrs (male more)	Soil & dust, Intestines of animal -P	ROLS * Risus sardonicus * Opisthotonus * Lockjaw (trismus) * Spastic paralysis (tetany)		Airway obstruction Resp. arrest Heart Failure Pneumonia	* isolation *cleaning wound *TIG (IM) * penciline C inj. * Diazepam inj. * resp. support	Active : Penta/DPT - 6,10,14 week or TT Passive : TIG / ATS (pregnant who had all 5 prev. TT - Only a booster dose. Pregnant who didn't receive prev. : TT - 2 doses of TT 1 month apart : 1 at 16-20 months other 20-24 week. Last dose preferred one month before delivery)
Rubella	RNA virus belonging to toga family		3-10 yrs age	Resp. route * Droplet inf. * Droplet nuclei Vertical transmission	Asymptomatic (50-65%) Symptomatic: * <u>Prodromal phase</u> : Coryza, sore throat, low grade fever * <u>Lymphadenopathy</u> : Post auricular & posterior cervical * Rash : Discrete, pink, macular rash first appears on face	Bacterial culture from throat swab RIA ELISA HAI test	Encephalitis Thrombocytopenic pupura CRS (Congenital Rubella Syndrome) : infants born with defects secondary to intra-uterine infection) ^s/s : deafness, acardiac malformation, cataract, cerebral palsy, retinopathy, glaucoma etc	Symptomatic	RA27/3 vaccine Or MMR

BACTERIAL DISEASES

Diseases	Agent	Communicability	Age & Sex	Mode of Transmission	S/S	Diagnosis	Complication	Treatment	Immunization
Leprosy	Mycobacterium leprae	Highly infectious	10-20 yrs (male more)	*droplet inf. *contact transmission	Advanced stage : * presence of nodules or lumps in the skin of face & ear * planter ulcer *loss of fingers & toes Foot drop Claw toes	* bacteriological test from skin smear & nasal smear * Histamine test * biopsy * Lepromin test * monoclonal antibody test	* Sensory loss * permanent nerve damage * muscle weakness * progressive disfigurement * Infertility * glaucoma	PB: (duration of treatment 6 months) * Rifampicin (once a month) * Dapsone (daily) MB: (duration of treatment 12 months) * Rifampicin & dapsone+Clofazamine once in a month)	
Typhoid & paratyphoid	Salmonella typhi, slamonella paratyphi A & B		5-19 yrs peak (more male)	Feco-oral or urine oral route Contaminated finger, food, water, flies	SRS HB *Step-ladder pattern fever * Rose spots on trunk * Splenomegaly * Headache * Bradycardia	Microbiological : blood culture Serological : Felix-Widal test New: Dipstick test	*Intestinal perforation *Intestinal hemorrhage *Pneumonia *Myocarditis	* ORS * Antibiotic:CAC C= Ciprofloxacin A= Azithromycin C = Cefixime *IV Ceftriaxone * Antipretic (Carrier : ampicillin/amoxicillin)	* Vi Polysaccharide capsule * Ty21a vaccine
Anthrax	Bacillus anthracis			Soils & Articles-P By Infection, Inhalation , Ingestion	Cutaneous : Painless ulcer with black eschar Pulmonary anthrax : drycough, dyspnea, hemoptysis, septic shock Gastrointestinal : vomiting, abdominal pain, bloody diarrhea Oropharyngeal : gross edema of neck, swelling of lymph node	Bacterial culture from blood or discharge Serological : ELISA PCR	In mild cases : Penicilin V In severe cases : Penicilin G Other drugs : Tetracycline, Ciprofloxacin	Vaccination of animals at risk Vaccination of at risk individual with Cell Free Vaccine	

VIRAL DISEASES

Diseases	Agent	Communicability	Age & Sex	Mode of Transmission	S/S	Diagnosis	Complication	Treatment	Immunization
Chicken Pox	Varicella Zoster Virus or Human Herpes Virus 3	1-2 days before & 4-5 days after appearance of rash	Children <10 yrs	*droplet infection *droplet nuclei *close contact	Pre-eruptive stage: Fever, pain Eruptive stage : Symmetrical rash 1st on trunk then face, arms, legs(more in center) Rapid evolution : Macule> papule> vesicle> crust Pleomorphism : Papule, vesicle, crust seen simultaneously Fever: low grade but increases with each fresh crop of eruption	Viral isolation on tissue culture Serum antibody demonstration Tzanck smear with vesicle fluid	Hemorrhage Encephalitis Reye's syndrome (rare but serious condition that causes swelling of brain & liver)	* loose fitting cotton dress *calamine lotion * Acyclovir * VZIG	Active : Varicella vaccine : 12-18 months children (not less than 1yr) Passive: VZIG
Mumps	Myxovirus parotidis	4-6 days before & 7-8 days after symptoms	5-15 yrs	*droplet infection *direct contact	Asymptomatic (30-40%) Symptomatic * One or both parotid gland swelling (1-2 weeks) *Pain & stiffness on opening of mouth *Ear ache *Headache	Cell culture for viral isolation in saliva ,urine ELISA HAI test	Orchitis Ovaritis Pancreatitis Neuritis Thyroiditis	* ORS * avoid citrus food *mouth care * warm salt water gargles *antipyretic *analgesic *prednisolone for orchitis	MMR (>1 yr) MIG

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Dengue	Dengue virus (DEN 1-4 serotypes)		Children have milder illness than adult	Bite of aedes mosquito	DF : Bone breaking Fever with chills, headache, muscle & joint pain, retroorbital pain, abdominal tenderness DHF: Acute bone breaking high grade continuous fever , gum bleeding, petechia, purpura, ecchymoses, epistaxis, hematemesis, hematuria, malena DSS : Rapid & weak pulse, hypotension, cold skin	* CBC (reduced WBC ,platelet, hematocrit) * Tourniquet test * Serological test * Viral isolation test *Serum albumin : hypoalbuminemia		* isolation under bed net * ORS * IV fluid	Vaccine for all 4 strains
Rabies	Rabies virus	In dogs & cats 3-5 days before onset of symp.		Bites , licks (on wound), respiratory transmission (by bats)	Prodromal Stage : headache , malaise ,pain, irritation Stage of excitation & nerve stimulation : Hyophobic, maniac Paralysis & death : due to resp. muscle paralysis	* history of bite * fluroscent antibody test		* Cleaning of wound with alcohol or povidone iodine * wound NOT sutures * Antibiotics * Anti-tetanus measures * Anti rabies serum * observation of animal for 10 days : if alive, no anti rabies treatment	<u>Not previously immunised:</u> HRIG : around the wound and gluteal region VACCINES HDCV : 6 IM doses (0,3,7,14,28 & booster on 90 th day) NTV : 14 SC inj. Around umbilicus for 14 days <u>Immunized prev. :</u> HDCV : 3 doses on 0,3,7 day (Bite is not severe & ab titer is known : 2 doses)

PARASITIC DISEASES

Disease	Agent	Mode of transmission	S/S	Diagnosis	Complication	Treatment
Malaria	plasmodium	Bite of anopheles mosquito	FAS Fever : high grade (104-106 F) with chills and rigor having 3 stage : Cold, Hot & sweating Anemia Splenomegaly	Blood slide examination Thick film: to identify parasite Thin film : to identify plasmodium species ELISA PCR	* Anemia * Splenomegaly * Hepatomegaly * Renal Complication (Cerebral malaria, Liver damage, ARF in falciparum)	<p><u>Treatment of malaria (for adult):</u></p> <p>A. <u>Treatment of falciparum malaria:</u></p> <ol style="list-style-type: none"> <u>Uncomplicated malaria (UM):</u> <ul style="list-style-type: none"> a. ACT (artemether and lumefantrine) combination 4 tablets each time at 0, 8, 24, 36, 48 and 60 hours. b. <u>Alternative treatment:</u> Any of the followings: <ul style="list-style-type: none"> ▪ Quinine 7 days + Tetracycline 7 days (Q7+T7). ▪ Quinine 7 days + Doxycycline 7 days (Q7+D7). ▪ Quinine 7 days + Clindamycin 7 days (Q7+C7). <p>2. <u>Sever malaria (SM):</u></p> <ol style="list-style-type: none"> <u>Pre-referral treatment:</u> <ul style="list-style-type: none"> ▪ IM quinine/rectal artesunate (when available). ▪ Quinine dihydrochloride: 20 mg/kg stat IM with half dose in each thigh. ▪ Artesunate rectal capsule: 10 mg/kg. <u>Hospital treatment:</u> <ol style="list-style-type: none"> <u>Initial parenteral therapy:</u> Any of the followings: <ul style="list-style-type: none"> ▪ IV artesunate (2.4 mg/kg stat followed by 2.4 mg/kg daily until the patient can tolerate oral medication). ▪ IM artemether (3.2 mg/kg stat followed by 1.6 mg/kg daily until the patient can tolerate oral medication). ▪ Quinine dihydrochloride 20 mg/kg stat followed by 10 mg/kg hourly. This may be given by slow IV infusion, not faster than 50 mg/kg/hr. <u>Follow up treatment:</u> Following initial parenteral treatment, once the patient can tolerate oral medication, it is continued and completed by oral ACT or artesunate or quinine. <p>B. <u>Treatment of vivax malaria:</u></p> <ul style="list-style-type: none"> ▪ Chloroquine 3 days plus Primaquine 14 days (CQ3 + PQ14). ▪ <u>CQ:</u> 4 tab 1st day + 4 tab 2nd day + 2 tab 3rd day. ▪ <u>PQ:</u> 1 tab daily for 14 days.

Filariasis	Wuchereria bancrofti Brugia malayi	Bite of Culex & Mansonia mosquito	*Asymptomatic microfilaremia * asymptomatic microfilaremia * stage of acute manifestation * stage of chronic obstructive lesions	Blood slide examination (10pm- 4 am blood) Provocative test	*permanent disfigurement *sexual dysfunction * social problem	<p>Twelve pillar of filariasis elimination:</p> <ul style="list-style-type: none"> A. Interrupt transmission: Mass treatment of 'at risk' population. Interruption of transmission can be achieved through: <ul style="list-style-type: none"> Chemotherapy: Annual single dose treatment of all the eligible members of at risk endemic communities (i.e. mass drug administration). <table border="1"> <thead> <tr> <th>Age</th><th>Tab. DEC (100 mg)</th><th>Tab. Albendazole (400 mg)</th></tr> </thead> <tbody> <tr> <td>2-8 years</td><td>1</td><td>1</td></tr> <tr> <td>8-12 years</td><td>2</td><td>1</td></tr> <tr> <td>Over 12 years</td><td>3</td><td>1</td></tr> </tbody> </table> <ul style="list-style-type: none"> Vector control: An integrated program is in place for control of lymphatic filariasis. Earlier, vector control was main method of control of leprosy. Vector control involves anti-larval measures, anti-adult measures and personal prophylaxis. An integrated method using all the vector control measures alone will bring about sustained vector control. <p>B. Morbidity control (relief of suffering): Community-level care of those with disease:</p> <ul style="list-style-type: none"> Lymphedema. Acute inflammatory attacks. Hydrocele repair. 	Age	Tab. DEC (100 mg)	Tab. Albendazole (400 mg)	2-8 years	1	1	8-12 years	2	1	Over 12 years	3	1
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Kala-azar	Leishmania donovani	Bite of female phlebotomine Sandfly	FAS HDL Fever intermittent Anemia Splenomegaly Hepatomegaly Darkening of skin Lymphadenopathy	Parasite demonstration Serological Test (rK39 dipstick, ELISA) Hematological test: IgG increased, Anemia, leucopenia, WBC:RBC =1: 1500/2000 Leishmanin test		<p>1st line-short term:</p> <ul style="list-style-type: none"> SSG (sodium stibogluconate) Amphotericin B <p>1st line-long term:</p> <ul style="list-style-type: none"> Miltefosine SSG <p>2nd line :</p> <p>Amphotericin B (in SSG failure) & Liposomal Amphotericin B(in SSG & Miltefosine failure)</p>												